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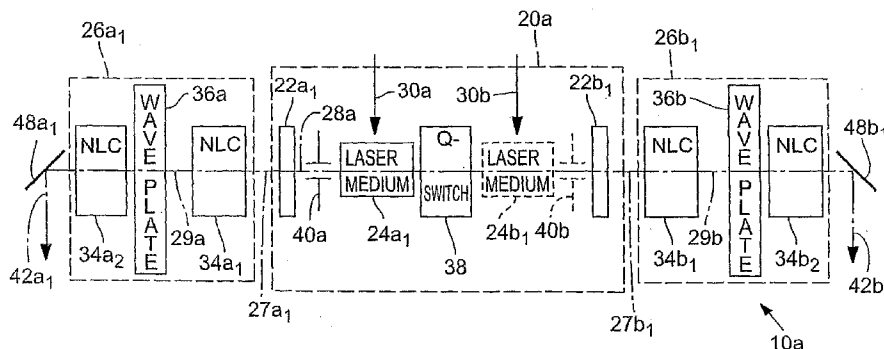
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(54) Title: MULTI-OUTPUT HARMONIC LASER AND METHODS EMPLOYING SAME



(57) Abstract: A solid-state laser (10a) has a laser resonator (20a) with output ports (22a1, 22b1) at both ends to provide two separate laser micromachining beams (42a1, 42b1). A set of wavelength converters (26a1, 26b1) can be employed to convert the laser micromachining beams to harmonic wavelength outputs, thus reducing the risk of damage to the wavelength converters and enabling higher total average harmonic power to be generated from a single laser. The laser micromachining beams can be different to perform different laser operations independently or can be adapted to have substantially identical parameters to permit simultaneous parallel high-quality laser operations on substantially identical workpieces (54), or the laser micromachining beams can be combined to provide a single laser system output (42e). The two laser machining beams can be further split or multiplexed to suit particular applications.

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